GEOGRAPHIC SCHOOL BULLETINS

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APRIL 11, 1960, VOLUME 38, NUMBER 26 . . . *To Know This World, Its Life*

Belgian Congo

also —

- ► Comets
- ► Washington's Poetry Center
- ► International Ice Patrol

W. ROBERT MOORE, NATIONAL GEOGRAPHIC STAFF

DARK AFRICA BRIGHTENS—Not many years ago, the medical student of the Belgian Congo, intent on his microscope (above), lived in a jungle village and watched witch doctors cure disease with a dance. Men with similar backgrounds now operate mining drills, textile looms, and calculating machines. But beneath the hum of this world, the beat of an earlier way of life can still be heard (left). This blend of primitive and modern life will become an independent country this June.

NO ISSUE during Easter week; next issue April 25

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and humid, discouraging any activity. Disease flourishes. In Stanley's caravan, men that survived the natives' poison arrows, drownings, fatigue, and crocodiles fell prey to dysentery, malaria, leprosy, yaws, sleeping sickness, and other maladies. Two-thirds of the group died on the trek.

Lush forests green one-half of the Belgian Congo. But they grow too fast, encroaching on land cleared for farms.

There was gold in those hills—and, in addition, silver, uranium, copper, iron, zinc, diamonds, manganese, lead, cadmium, and tungsten. There was also elephant ivory and wild rubber. As the gold in California sent New Yorkers rushing across the deserts and mountains of the United States, the promise of riches lured Europeans into the unmapped Congo jungle.

There still is gold in the hills. Mining is the backbone of a booming economy. Men tear copper, cobalt, tin, industrial diamonds, and uranium from Congo soil and rock.

A wealth of hydroelectric power is being developed. Cotton mills hum.

Where Stanley once pitched camp on a bank of the Congo stands modern Léopoldville, or Léo, as local residents call it. At the time Stanley and his fellow explorers were probably the only men in the country who could read and write, or who had ever seen a settlement bigger than a village. Today luxury hotels line palm-shaded streets. One can buy a $1,000 movie camera or a Paris-styled gown. Rock 'n roll blares from a café jukebox. An airport with jet-length runways lies outside the city.

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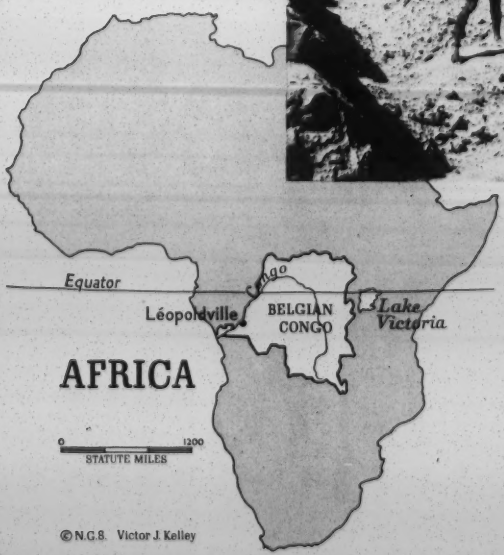

DIAMOND DIGGERS— Workmen (above) separate waste soil from diamond-bearing gravel along the Kasai River above Tshikapa. Trucks in foreground hold overburden; others, the diamond gravel. To get one carat of diamonds, workers must search through some three tons of earth.

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BELGIAN GOVERNMENT INFORMATION CENTER

Independence Comes to the Congo

THE CADILLAC DEALER in modern Léopoldville, above, capital of the Belgian Congo, and the pre-Stone Age pygmy of the eastern jungles will become citizens of a new country this summer.

The crowds that cried for "Independence! Immediate Independence!" during Belgian King Baudouin's December visit to the Congo have gotten their way: Belgium will grant freedom on June 30, 1960, to its colony of 13,500,000 people, 99.992 per cent of them Africans.

The country covers more than 900,000 square miles of central Africa, with a narrow strip of land along the Congo River stretching to the Atlantic Ocean (map below). Larger than the United States east of the Mississippi and 77 times the size of Belgium, it includes most of the Congo Basin and reaches halfway across equatorial Africa to the headwaters of the Nile. Basin lowlands are rimmed by upland plateaus rising in the east into snowy peaks and volcanoes.

Only 85 years ago, the country was practically unknown to white men. Henry M. Stanley, the first to trace the course of the 2,718-mile-long Congo River, spent 1876 and 1877 at the task. He returned to help Leopold II of Belgium set up the Congo Free State in 1885. The Free State became a Belgian colony in 1908.

Seldom has a region given unfriendlier greeting to settlers. Although it is formed from the basin of the world's fifth longest river, rapids and falls break much of the waterway's length. Early explorers had to get out of their boats and walk. Today a railroad bypasses the most difficult spot, connecting the port of Matadi, 90 miles up the Congo, with Léopoldville, 320 miles from the Atlantic.

The plains of the middle Congo are among the most fertile in the world, but twice-yearly rains drown them. Lying astride the equator, the lowlands are hot

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Much of the countryside still looks like Hollywood scenes of the Dark Continent. Crocodiles sun themselves among the reeds of the Congo shallows. From the wood-burning boats that ply the Congo—reminiscent of the Mississippi—one can watch hippos wading near the shore and monkeys swinging from trees. Boys below set their basketlike fish traps in Congo rapids.

Native villages of thatched huts dot the countryside near Tshikapa, center of the diamond-digging industry. All week crews comb the earth for diamonds. Sunday sees civilization retreat and primitive ways return. Ax-wielding men in leopard skins leap in tribal dances. Gourd-blowing women, blue tribal tattoos on their cheeks and foreheads, provide orchestral entertainment.

Villages line rivers where men hunt and fish and women work gardens of corn, manioc, sweet potatoes, and bananas. Even here, times are not quite the same as they used to be. Guns and iron kettles now appear in these primitive communities. Natives bought them with the seeds from the fruit of the oil palm tree which they once discarded. Machines in Léopoldville will crush the oil out of the seeds for export.

Race relations, the trouble that haunts Nairobi and Johannesburg, is less of a problem in the Congo, largely because it holds so few Europeans (only .008 of the population). Also, Belgian policy aimed for neither immediate integration nor final separation, but to progress the two races toward each other until equal achievements should make them equal partners. While the young native learns the white man's medicine, the European studies the witch doctor's use of plant extracts. Europeans and Africans in the Congo work together, learn together, but still live separately.

To push the bush farther and farther back, Belgians, working through local tribal chiefs and respecting tribal customs, have gotten a million Africans into classrooms, introduced health measures that have stamped out many of the worst diseases, and persuaded many farmers to use modern machinery. They have discouraged white immigration and decreed that no European can hold a job an African can do efficiently, thus making it more likely that the new state will be able to stand on its own feet when independence comes. L.B.

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PHOTOGRAPHS BY W. ROBERT MOORE, NATIONAL GEOGRAPHIC STAFF

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BASKET BRIGADE — Behind the glitter of the cities lies the bush, where women tote their manioc root, corn, and chickens in baskets atop their heads. The women at left wait for the ferry to take them across the Lulua River to market. A Congo River village basks in the sun, below. Houses have mud walls and thatched roofs. Side streams offer free parking for dugout canoes. The jungle in the background provides employment for the men—cutting logs for wood-burning river steamers. Although rapids and falls make boating impossible for most of the distance between the ocean and Léopoldville, the big river and its branches provide more than 8,000 miles of navigable flow east of the city.

Office buildings, apartments, and homes rise. A new university graduated its first class — four whites, seven blacks—in 1958.

Still, the bush is never very far away. A taxi driver wears a decorative tribal scar from his hairline to the tip of his nose and two marks on each cheekbone. In the native quarter of Léo, amid modern hospitals, schools, theaters, and apartments, women walk barefoot to market, produce balanced on their heads.

Vegetable and fruit dealers display their wares on mats and dishes in the open air.

Near some Congo cities, suburban housewives may have to wait for late commuter husbands some evenings—the 5:08 trolley has to stop when elephants cross the track.

In the southern mining district near Elisabethville, where American-made machinery helps dig copper, termite hills stand twice the height of a man, and pythons slither across roads.

transparent that stars shine as brightly

LESLIE H. PAPIER: RIGHT, MOUNT WILSON OBSERVATORY

be produced in a laboratory. Comets are so light that they show no gravitational effect on other bodies.

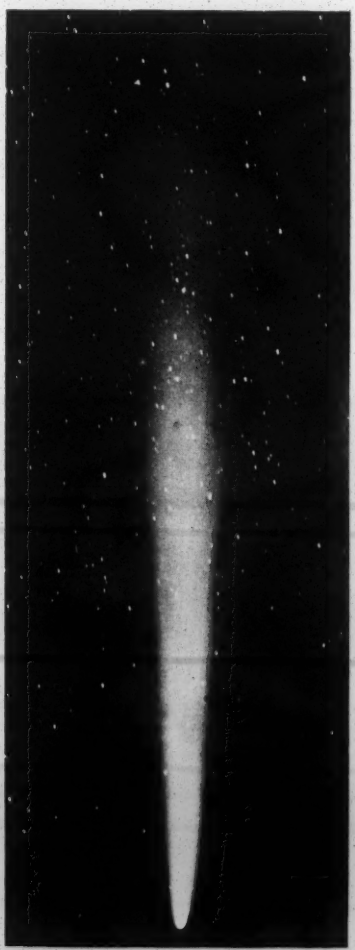
On the other hand, the planets exert strong effects on comets, tugging them out of orbit, sometimes making them take entirely new orbits.

One vestige of the old fear of comets remains in some minds—the idea that Earth might collide with one and be destroyed. Earth already has spun through comet tails at least twice—June 30, 1861 and May 19, 1910. Neither time was there any dire effect.

And the odds against a direct smashup between Earth and the nucleus of the comet's head are, well, astronomical. F.S.

through a comet as they did before it arrived. The smallest comet is bigger than Earth, but usually they are much larger—anywhere from 30,000 to 150,000 miles in diameter. The biggest on record appeared in 1811, with a diameter of 1,225,000 miles—farther across than the sun itself. These figures refer only to the heads. The tails may stretch several million miles.

The average density of a comet is thinner than the best vacuum that can



MOST FAMOUS comet, Halley's, appeared like this on its last visit, in 1910. It is due to return in 1986. Trail of a 1949 comet shows beyond Baltimore buildings (upper left).

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YERKES OBSERVATORY, UNIVERSITY OF CHICAGO

TO EARTH-BOUND man, comets have always been the most dramatic of celestial bodies. Appearing suddenly, trailing streamers of fire, moving erratically through the heavens, they have aroused fear and speculation through the centuries.

Often they were taken as signs of calamity. Shakespeare wrote in *Julius Caesar:*

When beggars die, then are no comets seen:
The heavens themselves blaze forth the death of princes.

Of the great comet of 1182, a chronicler reported: "So horrible was it, so terrible, so great a fright did it engender in the populace that some died of fear, others fell sick. . . . At its extremity we saw the shape of an arm holding a great sword as if about to strike us down. On either side were seen great numbers of axes, knives, bloody swords, amongst which were a great number of hideous human faces, with beards and hair all awry."

What are these disturbing astronomical apparitions, and where do they come from? For years, it was thought they were "flying gravel banks"—multitudes of tiny particles held loosely together by their own gravity—that visited the solar system from the reaches of space far away.

Now it is proved that they are members of the solar system, revolving around the sun. Their orbits are eccentric, and unrelated to the relatively thin plane in which the planets revolve.

Astronomer Fred L. Whipple of the Smithsonian Institution suggests that the head of a comet is made of fragments of frozen methane, water, and ammonia, mixed with meteorlike bits of iron, etc. When a comet comes close to the sun, the sun's radiation evaporates the ice into extremely thin gases that are pushed away from the head to form the tail. (A comet does not drag its tail behind it like a rope; rather, the tail always stretches from the side that is opposite the sun.)

Close to the sun a comet shines both with reflected light and some glow of its own, caused by the action of the sun's radiation on the gas molecules. Then it whirls away, the head freezes and it becomes invisible to us. In its wake it leaves gas molecules and bits of rock that may, if Earth swings through the area, collide with it as meteorites.

Comets, although often huge, are so transparent that stars shine as brightly

salities; T. S. Eliot's dry, preacherish notes underline his thought-laden cadences (photograph below). Also reflected in these voices are the singing affirmation of Edna St. Vincent Millay, the bitter, Greek-tragedy tones of Robinson Jeffers, the various moods and insights of a total of 46 modern poets.

The poet's understanding of his work helps our own. An example is E. E. Cummings, whose eccentric type placement on the printed page tends for many readers to obscure his relatively simple lyrics. Without the Linotype machine between us, poet and listener can come closer together.

The poets represented in this set show in their voices a wide variety of backgrounds. Though all speak English, their accents set them apart as fully as their word-use. The clipped, precise British English of Mr. Eliot (though he was born an American) contrasts with the Southern sonorities of John Crowe Ransom. Other poets show Midwestern or New York origins.

Rhythms set the poets apart as well. We hear Mr. Frost being playful (to drive home a serious point) in the strictest meter in "My Objection to Being Stepped On:"

At the end of the row
I stepped on the toe
Of an unemployed hoe.

Then comes Ogden Nash toying with sin in lines that would make a classical poet swallow his iambics, but that march to a wild rhythm of their own:

And the other kind of sin is just the opposite and is called a sin of omission and is equally bad in the eyes of all right-thinking people, from Billy Sunday to Buddha,
And it consists of not having done something you shuddha.

The editor of this album, Oscar Williams, points out in his introduction that few of these contemporary poets write the traditional love poem. The object of their passion, he says, is "suffering and social involvement." So in the collection we find poems about war (they are against it), the end of the world, self-doubt, useless death. These are not pretty themes, and some of these poems are not pretty.

But listen to Henry Reed as he sits under the teaching of a sergeant, learning how to handle a rifle. Suddenly amid this foolishness, his eye catches more important matters:

And this you can see is the bolt. The purpose of this
Is to open the breech, as you see. We can slide it
Rapidly backwards and forwards: we call this
Easing the spring. And rapidly backwards and forwards
The early bees are assaulting and fumbling the flowers:
They call it easing the Spring.

These poets, even while singing of destruction, try to follow the advice of one of their number, Stephen Spender:

Never to allow gradually the traffic to smother
With noise and fog, the flowering of the Spirit.

* A boxed set of three long-playing records, the album costs $13.50, plus ten percent excise tax and shipping costs. Inquiries should be addressed to the Recording Laboratory, Library of Congress, Washington 25, D. C.

FRANK SARTWELL, NATIONAL GEOGRAPHIC STAFF

UMI

Poets Go on the Record

Many unusual services are available to teachers as a result of activities of the United States Government. For instance, the Library of Congress is more than stacks of books and huge reading rooms. It preserves daily newspapers and motion picture film. It records folk songs, and distributes recordings of poetry read by the poets.

THE MULTITUDE of machines that seem to insulate modern man from nature has been the object of attack from many poets. For instance, W. H. Auden wrote in an epitaph for "The Unknown Citizen":

He was fully sensible to the advantages of the Installment Plan
And had everything necessary to the Modern Man,
A phonograph, a radio, a car and a frigidaire . . .

The irony of these lines is increased by finding them on a phonograph record. But that is where they are, read by Mr. Auden himself, in the new record album released by the Library of Congress, "An Album of Modern Poetry, An Anthology Read by the Poets." *

So, with the help of electronics, poetry has returned to its beginnings. Once, if you wanted to hear the music of poetry, you had to listen to the poet recite. Bards roamed the countryside, exchanging poems for bread and lodging, or attached themselves to the household of a noble who might call for a poem as Old King Cole called for his fiddlers three.

With the invention of printing, poetry branched out. For a fraction of the cost of keeping a poet, one could keep a library—or borrow one. Poets still recognized that their work was intended primarily to be heard and called reading poems silently "hearing with the eyes."

Now records have brought us back to hearing poetry with the ears again. Such a great bard as Robert Frost (right) is ready, in effect, to walk into our homes or classrooms at any hour, carrying a slim book of his poems, and read them for us.

THE WASHINGTON POST

Mr. Frost is heard in "An Album of Modern Poetry," explaining, among other matters, the turning point in his life:

Two roads diverged in a wood, and I—
I took the one less traveled by
And that has made all the difference.

Hearing the poems read by their creators adds strength and insight. Mr. Frost's hewn New England tones enrich his New England-hewn univer-

white fangs of the sea can still rend the steel flank of the best constructed ship.

It was to prevent such disasters that the International Ice Patrol was organized in the wake of the *Titanic* sinking. Actually, the Patrol has a perfect record, the *Hedtoft* tragedy notwithstanding. The Danish ship met its end 1,000 miles north of the regular Atlantic shipping lanes the Ice Patrol is pledged to protect. Since 1914 no ship has been lost to the iceberg menace south of a line from the southern coast of Newfoundland to Brest, France. Not one life has been sacrificed to the icy ghosts of the Atlantic.

Originally, 14 maritime nations agreed to form the iceberg-warning system. Today 16 nations share the cost. They are: United Kingdom, United States, Canada, France, Italy, Greece, Netherlands, Belgium, Norway, Sweden, Denmark, Liberia, Spain, West Germany, Panama, and Japan. The United Kingdom, with its heavy transatlantic shipping tonnage, pays about one-quarter of the bills. The U. S. Coast Guard shoulders sole responsibility for carrying out the job.

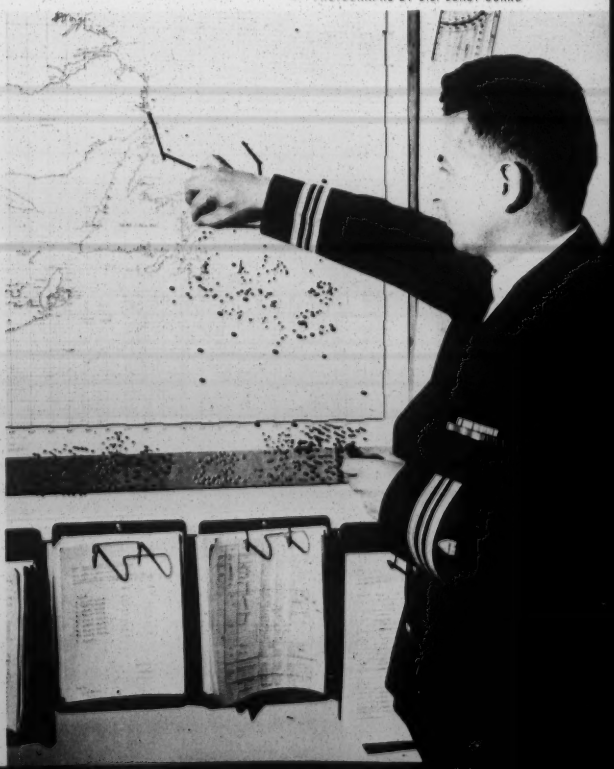
There is no similar patrol in the Pacific for the excellent reason that icebergs there pose no serious threat. Few are born along the Canadian and Alaskan Pacific Coasts, and those soon dissolve in warm currents.

This month, at Atlantic headquarters at Argentia, Newfoundland, Ice Patrolmen are busy preparing their aircraft and ships for reconnaissance sorties over an area of Newfoundland's Grand Banks about the size of Pennsylvania.

Practically all the bergs that appear off Newfoundland or farther south come from some 20 glaciers of western Greenland. During each arctic summer some 20,000 icebergs are "calved." Great chunks splinter off a glacier's seaward edge, plunging with a roar into the water to begin their voyage. Carried by currents and winds, the ghostly bergs sweep in ponderous procession down the "aisle" between Greenland and Canada's Baffin Island.

Coast Guardsmen know that most of the bergs will run aground in bays, break up from wave action, or melt from the sun and warm water. But if 1960 is an average year, they can figure that some 400 will survive and sweep into the open sea.

PHOTOGRAPHS BY U.S. COAST GUARD



The Ice Patrol is waiting. Electronic fingers stretch over thousands of miles of gray ocean, seeking icebergs, charting their courses, warning nearby ships. Reports flood into headquarters from the Patrol's aircraft and cutters, and from passing ships. As reports are sifted, each berg is represented by a colored pin on the master ice chart (right).

Coast Guard observers are trained to spot any type of ice. In iceberg terminology, there are three classes of glacier ice.

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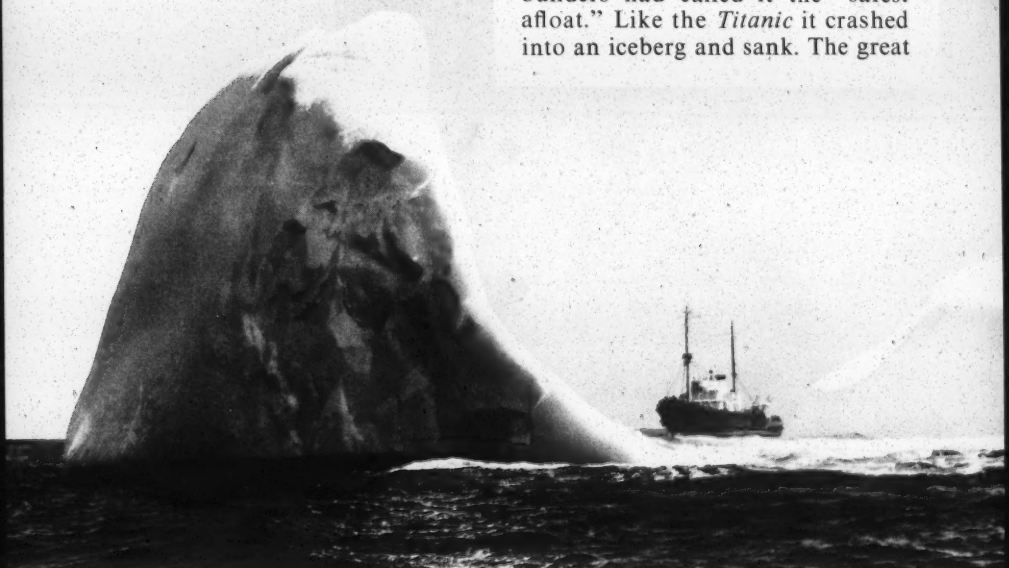
Stalking Atlantic's Icy Ghosts

THE TWO RADIOMEN on duty at Ice Patrol headquarters in Newfoundland stiffened with apprehension. Through their earphones came a nerve-jangling S O S—*Hans Hedtoft . . . collision with iceberg . . .*

Radiomen aboard several ships in the stormy North Atlantic heard it too, and reported the call to their captains. But even as the ships turned and raced to give aid they heard the *Hedtoft's* final message: *Slowly sinking . . . need immediate assistance . . .* Then silence.

When the Coast Guard cutter *Campbell* arrived at the scene off the southern tip of Greenland the next day, it found the sea adrift with bergs. One giant floe alone measured half a mile wide, 40 miles long. Of the ill-fated *Hedtoft* and its 95 passengers and crew, lookouts found no trace.

To mariners with long memories, last year's *Hedtoft* disaster had an ironic ring. Like the liner *Titanic* that went down in 1913 carrying 1,513 persons to their deaths, the *Hedtoft* was a new ship on its maiden voyage. Like the *Titanic*, its Danish builders had called it the "safest afloat." Like the *Titanic* it crashed into an iceberg and sank. The great



Coast Guard cutter keeps vigil, like a floating lighthouse, beside a towering iceberg drifting farther and farther south. By radio, whistle, or flare it warns passing ships of the menace.

U.S. COAST GUARD

A *growler* is the smallest, its above-water area equaling a dining table. A *bergy bit* compares with a small house. Anything larger is an *iceberg*.

On a clear day, rare around the fog-ridden Grand Banks, a deck officer can spot a tall iceberg some 18 miles away, an airborne observer many miles farther. But usually a low, dense fog shrouds the area. This makes an iceberg about as easy to locate as a polar bear swimming in milk.

The Ice Patrol's five planes fly in all but the dirtiest weather. With radar to cut through the fog and other electronic gadgets to tell the pilot where he is, a plane can pin-point a berg, then dive down for a closer look, dodging icebergs at wave-top height.

When the weather closes in completely, the Ice Patrol commander orders out two cutters to take up the reconnaissance.

Spotting an iceberg is half the mission; the other half is reporting it. Twice each day during the ice season, Station NIK at Argentia broadcasts ice bulletins to mariners.

To a ship captain such advance knowledge is vital. A compliment to any cutter baby-sitting beside a giant iceberg is not to sight another ship. The bare horizon proves the Ice Patrol's work has been well done. A.P.M.

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